Practicing for mid-term 2018

**1. Employee turnover calculations**

**1.1. What type of turnover measures did we learn?**

**1.2. How to calculate labour turnover index?**

**1.3. Define the survival rate and the half-life index in employee turnover analysis.**

**1.4. What is the labour stability index, and what does it represent?**

**1.5. Labour turnover index**

There is a company with 50 employees on average. Three of the staff leaves the firm in the given year. Calculate the index.

**1.6. Survival rate**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Quit**  **Hired** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| 2010: 30 | 8 | 5 | 2 | 0 | 1 | 0 |
| All the new hires join on 1st January, all quits happen on 31th December. | | | | | | |

Compute the 1 year survival rates for those hired in 2010.

Compute the 3 year survival rates for those hired in 2010.

**1.7. Calculate the half-life index for those hired in 2010 on the data in exercise 2010.**

**1.8. Stability index**

A company has 200 employees. Their work experience at the company:

* 30 employees: less than 1 year
* 30 employees: 1 years
* 40 employees: more than 1 year

One year ago, the total number of employees were 300. 200 with less then 1 year employment that time, 60 with 1 year, 40 with more than 1 year. Calculate the stability index.

***2. Workforce planning exercises***

**2.1. *How to calculate workforce demand (in working hours) for a project and for the annual regular activities of a firm*?**

**2.2. *How to calculate workforce supply of 1 employee*?**

**2.3. *How to calculate workforce supply of more than 1 employees*?**

**2.4. *How to calculate workforce demand (in number of employees) for a project and for the annual regular activities of a firm*?**

**2.5. There is a small firm with 3 different jobs: J1 (top manager), J2 (first line manager), J3 (worker).** The firm’s work schedule is as follows:

- from Monday to Friday: first shift: 6:00 to 14:00, second shift: from 14:00 to 22:00

- Saturday: only one shift from 7:00 to 15:00

- Sunday: no working

A top manager is needed 10 hours on weekdays independently of the shifts. First line managers should be present at the firm 1 hour before the start of the first shift and should not leave until 1 hour after the last shift. Workers should be there only in their working time (shift). In each shift 1 first line manager and 4 workers have to work simultaneously.

In the given year there are 250 weekdays that are also working days and 50 Saturdays that are not holidays. All managers and employees are identical (for the sake of simplicity). Everyone has 20 regular leave days (allowance) per year and they are expected to be on sick leave for 10 days per person and per year.

***a) Calculate the annual workforce demand in man-hours in every (J1, J2, J3) job.***

***b) How many employees should be hired in each of the jobs (J1, J2, J3)?***

***2.6. There is a small company with 10 permanent employees (workers).*** They are working 8 hours per day according to their contract. The maximum number of workers in the plant (in one shift) is 12. The plant is running 1 shift only (a shift is 8 hrs long). The average attendance rate is 0.9, the average performance is 85%.

***a) Calculate the earliest possible deadline for a project that needs 500 working hours to complete.***

***b) The company has two alternatives to reduce the total project time. ‘A’ alternative is to maximize the number of workers with two new hires (expected attendance rate is 100%, expected average performance is 70%). ‘B’ alternative is to assign 4 extra hours of work (overtime) per employee (during overtime the attendance rate is 0.8, the performance is at 70%, and it is known that 1 worker will not do the overtime at all) but do not hire new workforce. Calculate the project’s time-need under both alternatives.***

***2. Selecting applicants***

🖑 ***(under construction)*** 🖑

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| --- | --- | --- |
| **Human Resource Management** | University of Debrecen Faculty of Economics and Business  Department of HRM | **A** |
| Mid-term paper (31/10/2017) |

Name: …………………………………….. Neptun: ……………………………….. BAM / BI / Erasmus

**Do not forget to fill the Answer Sheet on the last page!**

**Multiple Choice (only one answer is correct)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Which selection technique has (in general) the lowest validity.**   1. Typical job interviews. 2. IQ tests. 3. Assessment centres. 4. Work-sample tests. | | | |
|  | **It is describing how values, principles should be applied.**   1. HRM strategy 2. HRM philosophy 3. HRM practices 4. HRM policy | | | |
|  | **Long term effects of HRM policies were introduced first into the HRM models in the…**   1. Michigan School model 2. Harvard framework 3. Job Design Model 4. Strategic HRM model | | | |
|  | **… is a need or a want that causes us to act.**   1. drive b) motivation c) desire d) motive | | | |
|  | **Wage level has a great effect on …**   1. …ability 2. …extrinsic motivation 3. …intrinsic motivation 4. … ability and motivation and job design | | | |
|  | **If you work hard in your job because you think that the success is important for your country, then…**   1. you are satisfied in your job 2. you are extrinsically motivated 3. you are intrinsically motivated 4. you are motivated by affiliation needs | | | |
|  | **Employee referrals is a method of…**   1. recruitment 2. selection 3. hiring 4. socialization | | | |
|  | **Calculate the 1 year survival rate of employees hired in 2000, if 12 people were hired on 1/1/2000, 4 of them left the firm during the year 2000, and another 3 left during the year 2001, and one during 2002.** | | | |
| 1. 33% | 1. 67% | 1. 50% | 1. 58% |
|  | **One of the following statements is true. Which one?**   1. Satisfied workers are usually productive workers. 2. High satisfaction leads to high motivation. 3. Job satisfaction is unlikely to directly produce high performance. 4. Satisfaction and motivation are not connected to each other at all. | | | |
|  | **Which one of the following definitions is correct in the KSAO model?**   1. Knowledge: organized body of factual and procedural information 2. Skills: anything required for a job except knowledge and ability 3. Abilities: capability to perform a given task accurately and with ease 4. Other characteristics: more stable and enduring capability to perform a variety of tasks | | | |
|  | **… are employed by a supplier agency but actually working at the firm.**   1. core personnel 2. individual contractors 3. loaned workers 4. temporary employees | | | |
|  | **A group of prescribed tasks/activities to be carried out is called …, while the part people play in their work/organization is called …**  a) role; job b) job; role c) job family; function d) task group; function | | | |
|  | **… is the process for ensuring that the human resource requirements of an organization are identified and plans are made for satisfying those requirements.**  a) HR planning b) HRM startegy c) Human capital management d) Personnel management | | | |
|  | **One of the followings is NOT an internal stakeholder.**   1. employee 2. manager 3. owner 4. customer | | | |
|  | **If the number of separations in a given year is 40, and the labor turnover index is 5%, then…**   1. The average number of employees in the given year is: 800 2. The average number of employees in the given year is: 200 3. The average number of employees in the given year is: 42 4. The average number of employees in the given year is not computable from this data. | | | |

**Calculation problem**

There is a small shop with 2 type of jobs: J1 (manager), and J2 (sales person). The shop is open on every weekday from 9:00 to 17:00, and on Saturdays from 7:00 to 12:00. The manager has to perform its duties 8 hours a day on every weekday and 4 hours on Saturdays, independently of the opening hours. The sales staff has to start its work 1 hour before the shop opens and finish 0.5 hour after closing. In a year there are 250 weekdays and 50 Saturdays (there are no public holidays). All employees are considered to be identical. They have 20 regular leave days (paid holiday) per year and they are expected to be on sick leave for 9 days per year per person. According to the regulations the working time is 8 hours on five days (weekdays) per a week.

1. ***Calculate the annual workforce demand in labor-hours in every job.***
2. ***How many employees should be hired in each jobs?***

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| --- | --- | --- |
| **Human Resource Management** | University of Debrecen Faculty of Economics and Business  Department of Organization Sciences | **A** |
| Mid-term paper |

**Answer Sheet**

**Multiple Choice** (maximum points: 30 = 15 x 2) Points: …….. / 30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 |  | 7 |  | 13 |  |
| 2 |  | 8 |  | 14 |  |
| 3 |  | 9 |  | 15 |  |
| 4 |  | 10 |  |  |  |
| 5 |  | 11 |  |  |  |
| 6 |  | 12 |  |  |  |

**Calculation:** (maximum points: 15) Points: …….. / 15

1. ***annual workforce demand for* J1*:* ……………………………… man-hours** (4 pts) ***annual workforce demand for* J2*:* ……………………………… man-hours** (4 pts)
2. **Mathematically ……………………………… employee should be hired for J1** (3.5 pts) **Mathematically ……………………………… employee should be hired for J2** (3.5 pts)*(Calculate both for J1 and J2 up to two decimals.)*